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10/550,598

07/24/2006

Hee-Seob Kim

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23413 7590 01/09/2009
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EXAMINER

CALEY, MICHAEL H

ART UNIT

PAPER NUMBER

2871

NOTIFICATION DATE

DELIVERY MODE

01/09/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

| | | | |
|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/550,598 | Applicant(s) KIM ET AL. | |
| | Examiner MICHAEL H. CALEY | Art Unit 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-13 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Ting et al. (U.S. Patent No. 6,922,183 “Ting”).

Regarding claim 1, Ting discloses a thin film transistor array panel comprising:

- an insulating substrate (abstract; Figures 9 and 10 element 322);

- a plurality of gate lines (SL_m, SL_m+1) formed on the insulating substrate;

- a plurality of data lines (DL_{1n}, DL_{2n}) insulated from the first signal lines and intersecting the first signal lines; and

- a plurality of groups, each group comprising:

- a pair of first (SP1) and second (SP2) pixel electrodes capacitively coupled to each other (902, 1002, 1004), disposed on pixel areas defined by intersections of the gate lines and the data lines and arranged in a matrix;

- a first thin film transistor (S1) connected to one of the gate lines and one of the data lines, and connected to or capacitively coupled to the first pixel electrode;

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a second thin film transistor (S2), connected to the second pixel electrode and one of the gate lines that is disconnected from the first thin film transistor.

Regarding claim 2, Ting discloses a coupling electrode (902, 1002) connected to the first pixel electrodes and overlap the second pixel electrodes while being insulated therefrom.

Regarding claim 3, Ting discloses the coupling electrode as connected to a drain electrode of the first thin film transistor (902, 1002).

Regarding claim 4, Ting discloses a plurality of third signal lines (SL_{m+1}) intersecting the data lines, wherein the second thin film transistor is connected to one of the third signal lines and the data lines.

Regarding claim 7, Ting discloses a gate insulating layer (320) disposed between the gate lines and the second signal lines; and a passivation layer (318) disposed between the second signal lines and the first and the second pixel electrodes, wherein the coupling electrodes are connected to the first pixel electrodes through contact holes at the passivation layer (Column 7 lines 11-14).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ting in view of Kim et al. (U.S. Patent No. 6,473,142 “Kim”).

Ting fails to disclose at least one of the pixel electrodes as having at least one domain partitioning member. Kim, however, teaches a domain partitioning member on a pixel electrode (element 57) as a means of creating a multi-domain display characteristic (Column 2 lines 1-4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a domain partitioning member on at least one of the pixel electrodes. One would have been motivated to form such a domain partitioning member as a means of improving brightness and image stability at wide viewing angles (Column 2 lines 1-4).

Allowable Subject Matter

Claim 5 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 8-13 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, the prior art fails to disclose or suggest the thin film transistor array panel having the third thin film transistor configured in the group as proposed.

Regarding claims 8-13, the prior art fails to disclose or suggest a liquid crystal display having a first and second insulating substrates, gate line, storage electrode, gate insulating layer,

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first and second amorphous silicon layers, data line, first source electrode, second source electrode, first and second drain electrodes, coupling electrode, passivation layer, first and second pixel electrodes, and common electrode each as proposed in claim 8.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 6, and 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL H. CALEY whose telephone number is (571)272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael H. Caley/
Primary Examiner, Art Unit 2871